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Changes in Resistance to the Social Integration of Foreigners in Germany 1980–2000: Individual and Contextual Determinants

Marcel Coenders and Peer Scheepers

In this article we analyse the change in unfavourable attitudes towards foreigners among the (West) German public over a period of two decades. Applying pooled survey data from 1980 to 2000, we found an overall trend towards less resistance to the social integration of foreigners, only interrupted by a minor increase between 1994 and 1996. We tested hypotheses derived from Ethnic Group Conflict Theory with regard to individual and contextual determinants of the resistance to the social integration of foreigners. National statistics were applied to indicate the societal context at the time of survey measurement (period characteristics) and during the adolescent years of respondents (cohort characteristics). Resistance to the social integration of foreigners was particularly strong among people with lower education, manual workers, the petty bourgeoisie and the unemployed. Furthermore, older respondents as well as those who were confronted with high unemployment during their adolescent years showed stronger resistance. With regard to period characteristics, we found that stronger resistance to the social integration of foreigners was not related to higher levels of unemployment and foreign immigration, but instead to recent increases in unemployment and foreign immigration. This suggests that it is not the actual level of ethnic competition, but the increasing level of ethnic competition that boosts negative attitudes toward foreigners.

Keywords: *Social Integration; Immigrants; Exclusionism; Germany; Longitudinal Study; Ethnic Group Contact Theory*

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Previous research (Kühnel and Terwey 1994; Terwey 2000; Wiegand 1992; Winkler 1999) has shown that unfavourable attitudes toward guestworkers in West Germany decreased from the early 1980s up to the mid-1990s. Over time, less and less support had been found among West Germans for sending back foreigners when unemployment is on the rise, prohibitions for foreigners to participate in politics, and resistance to inter-ethnic marriages. All of these issues refer to (resistance to) the social integration of foreigners. This change seemed to imply that the social basis for the social integration of foreigners among West Germans had become wider. Such a trend has also been ascertained in, for instance, the United States (Schuman *et al.* 1997), but not in the Netherlands (Coenders and Scheepers 1998). However, between 1994 and 1996 a slight change took place in Germany, implying a slight counter-trend: resistance to the social integration of foreigners became more widespread. So, our first question addresses this longitudinal development: has the increase in resistance to social integration, ascertained in the mid-1990s, continued up to the year 2000? We will set out to describe the trend and countertrend in resistance to social integration from 1980 onwards up to the year 2000.

Next, we will focus on the determinants of resistance to social integration. In previous research, a number of socio-demographic and socio-cultural determinants have been shown to be statistically significant and relevant (Terwey 2000: 304–23; Wiegand 1992; Winkler 1999: 102–14). These studies concentrated predominantly on the effects of contemporary characteristics of respondents. However, none of these contributions focus on the particular nature of these longitudinal data, and so have not yet exploited possibilities to include other determinants by which individual survey data can be enriched. Therefore, we will focus on the effects of contextual characteristics present at the time of survey measurement (period effects) as well as effects of contextual characteristics present during the adolescent years of respondents (cohort effects), alongside individual determinants of resistance to social integration. The question we will address therefore is: to what extent do period and cohort characteristics, next to individual characteristics, have effects on resistance to social integration of foreigners? In order to arrive at well-elaborated theoretical answers to the latter question, we will derive hypotheses from Ethnic Group Conflict Theory. We test these hypotheses performing multiple regression analysis using the pooled survey data available for the period 1980–2000.

Theories and Hypotheses

In order to select period and cohort characteristics, along with individual socio-demographic characteristics, that may affect resistance to social integration, we have previously explored two paradigms that we consider to be complementary: *Realistic Conflict Theory* and *Social Identity Theory* (Coenders and Scheepers 1998; Scheepers, Gijsberts and Coenders 2002). Central in Realistic Conflict Theory is the proposition that competition over scarce resources between social groups is considered to be the catalyst of antagonistic intergroup attitudes. This has been underlined by two quite

different traditions, both dating back to the 1950s. Social psychological experiments have shown that competition between groups improves solidarity within a specific group and increases hostility between groups (Sherif and Sherif 1979). Sociologists have focused on societal causes of group conflicts as well as on societal conditions under which these conflicts arise. Coser (1956) claimed that each social system is characterised by competition over scarce resources (material resources, power and status) between social groups, such as ethnic groups. Blumer (1958) added that the dominant group has a sense of claims on these scarce resources over subordinate groups. In this theoretical tradition, Blalock (1967) suggested that competition may refer to a micro level, i.e., competition between individuals from ethnic groups who hold similar social positions, such as working in similar niches of the labour market. Blalock proposed that these actual competitive conditions might affect the majorities' perceptions of competition, that is the subjectively perceived (socio-economic) threat on the part of ethnic outgroups, which in turn may induce hostile, unfavourable stances toward these outgroups. We propose that such unfavourable stances may possibly also relate to resistance to social integration. This line of sociological theorising started from the bedrock assumption, explicated by Bobo (1988, 1999), in line with the classic work of Blumer (1958), that dominant group members affectively distinguish themselves as group members from other subordinate outgroups. This distinction is linked with the presumed traits of both the ingroup and the outgroups. The latter proposition has been substantiated by a second paradigm, *Social Identity Theory* (Tajfel 1981, 1982), according to which individuals have the fundamental need to perceive their ingroup as superior to ethnic outgroups. Subsequently, they apply the favourable traits that they perceive among members of the ingroup to themselves via a mental process labelled as social identification, and they value outgroups negatively via the mental process of social contra-identification. We propose that, under competitive conditions, central in Realistic Conflict Theory, these processes may intensify. Therefore, we consider Social Identity Theory to be complementary to propositions from Realistic Conflict Theory.¹ We re-state this as *Ethnic Group Conflict Theory*, summarised in a core proposition: intergroup competition, at an individual as well as at a contextual level, may reinforce the mechanisms of social (contra-)identification; the eventual outcome may result in ethnic exclusionism among which resistance to the social integration of foreigners can be considered to be a more specific phenomenon.

Now, we use Ethnic Group Conflict Theory to derive hypotheses regarding period characteristics related to the nature of longitudinal data, as Fossett and Kiecolt (1989) and Quillian (1996) have done previously. Given the crucial proposition on competition, we propose that the higher the level of competition at a given moment in time, the more widespread resistance to foreigners might be. If we assume that, first, immigration creates a situation where, *ceteris paribus*, more people compete for a share in the limited amount of scarce societal resources and second, unemployment creates a situation where the same number of people, *ceteris paribus*, compete for fewer resources, then it follows that the level both of immigration and of

unemployment may affect resistance to social integration. Following Olzak (1989) we expect that, in addition to the contemporary level of competition, *changes* in the level of competition have an additional effect; in other words, increasing immigration and unemployment may lead to stronger resistance to social integration. One could even propose that it is not so much high unemployment, but rather the *perception of rising* unemployment, that heightens negative attitudes toward ethnic minorities. In the Netherlands we found empirical evidence for this particular hypothesis (Coenders and Scheepers 1998). We will test whether there are similar effects in West Germany.

Ethnic Group Conflict Theory has also helped us to derive hypotheses on cohort characteristics that may affect resistance to the social integration of foreigners. We tried to build on Mannheim's cohort theory (1964), which essentially proposes that societal circumstances during one's formative years may have lasting, even lifelong, effects on attitudes and behaviour. Taking this proposition seriously led us to propose that the more competition one has been exposed to in one's formative years, the more widespread is one's resistance to social integration. Building on our previous propositions, this implies that we expect that the higher the level of immigration during those formative years, or the higher the level of unemployment during one's formative years, the more widespread the resistance to the social integration of foreigners (still) is.

From Ethnic Group Conflict Theory we may also derive hypotheses with regard to the effects of individual characteristics on resistance to social integration. It can be expected that the level of ethnic competition varies between social categories, as proposed by Espenshade and Hempstead (1996). Particularly those social categories that hold similar social positions as ethnic minorities or those social categories that live close to ethnic enclaves may experience higher levels of ethnic competition and therefore display more widespread resistance to social integration. In many European countries, including Germany, a large majority of non-indigenous ethnic residents is located in the lower strata of society, very often concentrated in urban areas. This means that lower-strata West Germans who hold about similar social positions as ethnic minorities—that is, those with a low educational level² or a low income level, those performing manual labour, those who are unemployed, or those who live in urban areas—will have to make extra efforts to compete with ethnic minorities on, for instance, the labour market, which may induce more resistance to the social integration of foreigners. Actually, in previous research, partial support for similar hypotheses has already been presented (Terwey 2000; Winkler 1999).

As well as this set of hypotheses we will test another hypothesis derived from another branch of theory claiming that contact with ethnic outgroups may lead to acquaintances and hence less negative attitudes. Allport (1954), however, already pointed out more than 50 years ago that intergroup contact as such is not sufficient to reduce prejudice. The research literature now lists a number of additional conditions, such as the condition that contact must occur between members of groups with equal status, and both groups should have common goals in cooperative tasks (Brewer and Miller 1988; Brown 1995; Hamberger and Hewstone 1997).

Therefore, we derive the hypothesis that voluntary, equal status contacts may reduce prejudice against outgroups and, moreover, may reduce the resistance to social integration.

Methodological Issues: Testing Period and Cohort Effects Simultaneously with Age Effects

Testing such hypotheses on period and cohort effects as compared to age effects touches upon a methodological issue known as the APC-identification-problem (Glenn 1977): including determinants like age, period (year of survey measurement) and cohort (birth year) in structural equations runs into problems of perfect collinearity. Many solutions for this problem have been proposed, a number of which have been discarded. The most viable of these solutions, initially proposed by Rodgers (1982), Blossfeld (1986) and Menard (1991), have been applied by us in previous research (Coenders and Scheepers 1998). This solution involves the replacement of 'period' with the actual societal circumstances, derived from theoretical propositions, that may affect the dependent variable, i.e. resistance to social integration. A similar procedure holds for 'cohort': it is replaced by the actual societal circumstances during people's formative years that theoretically have been proposed to affect the dependent variable. The advantage of this procedure pertains not only to the solution of the collinearity problem. Its major advantage is that hypotheses derived from theories can be formulated more elaborately, more consistently and more informatively without having to refer to 'empty' determinants like 'period' and 'cohort'. As such, derivations from theories can be tested more rigorously. This implies, however, that researchers have to find valid societal macro-data with which they can enrich their micro-data, a serious task with crucial limitations, as we will show. Considering the fact that 'merely' seven points in time are available (see below), performing multi-level analyses on these data appears rather complicated (Snijders and Bosker 1999). Moreover, the fact that cohorts are not clearly hierarchically nested within any of these periods complicates such possibilities even further.

Taking into account Germany's particular history, the people who were in their formative years just before and during World War II have been exposed to a quite extraordinary set of societal circumstances that may have left 'scars' in their attitudes and behaviour. Some of these circumstances may have affected resistance to the social integration of foreigners, for instance exposure to Nazi propaganda. Similar hypotheses have been proposed by Jagodzinski *et al.* (1990: 457), who state that older cohorts have been exposed to ideologies of racial superiority. More in general, we could propose that the press climate during this particular period of history, which was obviously highly unfavourable to all kinds of ethnic and/or deviant groups in society (Falter 1991), may have had cohort effects on resistance to social integration. Similar effects have been shown more recently: over the period 1989–98 we found longitudinal covariation in the number of articles on asylum-seekers with the intention to vote for extreme-right-wing parties in West Germany (Lubbers and

Scheepers 2001). However, testing such hypotheses for earlier years involves the collection of newspaper articles on ethnic minorities and foreigners over the period 1925–80; not really a feasible task.

Now, having assessed that we cannot strictly test hypotheses on the relationship between these formative circumstances and contemporary resistance to social integration does not imply that we ignore these older birth cohorts; we will perform cohort analyses in order to ascertain to what extent these cohorts who during their formative years have been exposed to such typical societal circumstances actually carry long-lasting scars, observable in their resistance to the social integration of foreigners. For the cohorts born later, and who reached their formative years from the 1950s on, we have been able to find valid societal data, and therefore will be able to test our hypotheses regarding the impact of the formative years more strictly.

Data and Measurements

We apply data from the ALLBUS, a general social survey in Germany that is conducted every two years among a representative sample of the German adult population (Andreß *et al.* 2003). The ALLBUS offers the opportunity to study attitude change towards guestworkers and foreigners over a period of two decades. In this study, we restrict our analysis to the Western part of Germany, in order to analyse the long-term attitude change. Survey items regarding the attitude towards foreigners were applied at seven points in time, from 1980 to 2000. Until 1990, only German citizens were included in the sample. In order to enhance comparability over time, we excluded respondents without German citizenship from our analysis.

Resistance to the social integration of guestworkers and foreigners living in Germany was indicated by three items with great face validity.³ The notions that foreigners should seek spouses within their own ethnic group and that they should not be allowed to participate in politics explicitly refer to resistance to social integration in specific social domains. The third item, sending back foreigners in times of unemployment, less explicitly refers to this type of resistance: this question implies that the presence of foreigners is considered to be of a temporary nature, merely referring to their economic utility. There is another question present in this battery of items that in previous research has also been used to tap a more general unfavourable attitude towards foreigners. This refers to the adaptation of foreigners to the lifestyle of the Germans. This item has less face validity: it may also refer to other aspects than resistance to social integration, in particular the support for the cultural assimilation of foreigners. The empirical evidence also reflects this: the correlation between this item and the other three is lower than the correlations among the three other items.⁴ We therefore restrict our analyses to the three aforementioned questions.

Individual Characteristics

In order to test our hypotheses rigorously, we simultaneously analyse a large number of socio-demographic and socio-cultural characteristics that, according to previous research, may be relevant for the explanation of resistance to the social integration of foreigners. Fortunately, the ALLBUS contains a considerable number of characteristics that are identically measured in each survey.

Education was measured as the highest completed general education, excluding those respondents who are still at school. To distinguish *occupational groups*, we applied the nominal class scheme of Erikson and Goldthorpe (1992), to which we added a category of people who are *unemployed* and a category of people who are not employed for other reasons (including the retired, and people working in their own household).⁵ *Income* is measured as the net monthly household income. In order to achieve a longitudinal comparable measurement, we recoded the variable into ordinal quartile categories. Since the number of missing answers on this question was rather high (24 per cent), they were included as a separate fifth category. *Denomination* was included as a control variable in the analyses. Since ethnic minorities are over-represented in urban areas, we also include *urbanisation* in the analyses, measured as the municipality size.

Furthermore, we investigate the relationship between the attitude towards foreigners and general political attitudes. Kühnel and Terwey (1994) showed strong relationships between the ALLBUS items on foreigners and respectively left–right self-identification and Inglehart's materialism index. *Left–right self-identification* was measured by asking respondents to place their own political viewpoints on a ten-point scale, ranging from left (score 1) to right (score 10).⁶ The *materialism index* was measured by asking respondents to rank the importance of four political goals: maintain calm and order, give people more say in the decisions of government, fight rising prices, and protect freedom of speech. Respondents who give highest priority to the goals of 'calm and order' and 'fighting rising prices' are considered to be materialists, whereas respondents who prioritise the other two goals are considered to be post-materialists. Respondents who rank a post-materialist goal first and a materialist goal second are labelled as 'mixed post-materialists', or vice versa, as 'mixed materialists'. The higher the score on the materialism index, the more the respondent has a materialist value orientation. Finally, the ALLBUS survey also contained questions regarding contact with guestworkers or foreigners. Contact was measured in four different social domains: within the family, at the workplace, in the neighbourhood, or among friends or acquaintances.

Contextual Characteristics: Period and Cohort Characteristics

The effects of cohort, period and age cannot be identified separately since these variables are linearly dependent. We try to solve this identification problem by replacing the variable birth cohort by characteristics that measure theoretically

relevant social circumstances during a person's formative years. Likewise, we apply theory-driven characteristics as direct indicators of the social circumstances during the period of survey measurement. In this manner we apply direct measurements of theoretical characteristics for which period and cohort are only indirect indicators.

However, it is hard to ascertain to what extent the applied direct measures are exhaustive and capture the relevant social circumstances in a given period or during one's formative years (Firebaugh 1997). Hence, we initially tried to gather an extensive number of contextual variables, indicating period and cohort characteristics, not only referring to immigration and unemployment but also to other social circumstances. As we shall see, only a subset of these variables could be taken into account simultaneously, due to strong interrelations between contextual characteristics.

Regarding period characteristics, we applied statistical data regarding various economic and demographic social circumstances. First, we took the *relative unemployment figure* in the year of survey measurement in the Western part of Germany, defined as the registered number of unemployed, expressed as a percentage of the civil dependent labour force (Statistisches Bundesamt various years a).⁷ We also took into account the percentage of *foreigners* in the Western part of Germany in the year of survey measurement (Statistisches Bundesamt various years a, b). The yearly figures in 1987–89 were corrected for the 1987 census.⁸ *Immigration* was measured as the number of foreign immigrants per 1,000 inhabitants in the year of survey measurement (Statistisches Bundesamt various years a, b). After German reunification, the figures relate to united Germany. Finally, we applied the *number of asylum applications* ($\times 1,000$) as a second indicator of the inflow of ethnic minorities (Statistisches Bundesamt various years a).⁹

In order to measure the *changes* in unemployment, foreign population, immigration and asylum applications, we took the ratio of the figure in the year of survey measurement and the figure five years earlier. We posit that resistance to social integration is stronger when individuals subjectively perceive an increase in ethnic competition over the last five years.¹⁰

Cohort characteristics were operationalised as the social circumstances during the formative years of individuals. Our search for theoretically relevant societal conditions during the formative period was seriously hampered by the lack of statistical data. Generally, data regarding the percentage of foreigners, immigration and unemployment are not available for the period before 1950, at least not with respect to yearly figures. In general, time-series in Germany—for obvious reasons—do not cover the period between 1938 and 1950. If we operationalise the formative period as the period in which the respondent was between 16 and 20 years of age, then we will have to restrict these analyses to respondents born from 1930 on.

The level of *unemployment during the formative years* was measured as the mean relative unemployment figure over the period when the respondent was between 16 and 20 years of age (Statistisches Bundesamt various years a).¹¹ The *percentage of foreign population during the formative years* was measured as the mean percentage of

foreign population when the respondent was between 16 and 20 years of age (Statistisches Bundesamt various years b).¹² Finally, the level of *immigration during the formative years* was measured as the mean number of foreign immigrants per 1,000 residents when the respondent was between 16 and 20 years of age (Statistisches Bundesamt various years a, b).¹³

Index of Resistance to Social Integration

Instead of merely analysing responses to individual items, we construct an index of resistance in order to enhance reliability. We started by investigating the factorial structure of the set of items referring to resistance to social integration. Until 1990, the items referred to 'guestworkers', but by the early 1990s this term was becoming increasingly out-of-date, and from 1994 onwards the items therefore referred to 'foreigners living in Germany'. To ascertain the effect of this change in question wording, two split questionnaires were applied in 1994, one with items referring to 'guestworkers' and the other one with the same items referring to 'foreigners living in Germany'. Blank and Wasmer (1996) showed that this change in question wording had almost negligible effects on the means, factorial structure, reliability and validity of the items. Hence, the items can be considered as equivalent.

Winkler (1999: 128) showed for the 1996 data that the items belong to a one-factorial dimension, although together with another set of items. Terwey (2000: 303) also suggested, on the basis of exploratory principal component analyses, that this set of items refers to a one-factorial latent construct. However, since we want to study changes in time, the question arises as to what extent the validity and reliability of the items have changed over time. This issue has not been seriously addressed since one of the first studies on this set of items by Krauth and Porst (1984).

Therefore, we conducted a multi-sample analysis to test whether it is acceptable to claim that there is actually one latent dimension underlying these items, and that the factor loadings are equivalent over time, as well as the factor variance and the error variances. Our findings showed that the three items could be considered as equivalent measurements over the period 1980–2000.¹⁴

Based on these findings, we constructed an index of resistance to social integration. The index was constructed as a summated rating scale of the three items, with a range from one to seven (from 'completely disagree' to 'completely agree' on all three items). The scale reliability was rather high (Cronbach's $\alpha = 0.75$). Scale scores were computed for all respondents with at least two valid answers on the three items.

General Changes in Resistance to Social Integration

Let us first consider the overall change in resistance to social integration of guestworkers and foreigners. The mean scores of the index and the separate items are displayed in Figure 1. For 1994, mean scores are displayed for the two split questionnaires ('guestworkers' and 'foreigners') as mentioned in the previous section.

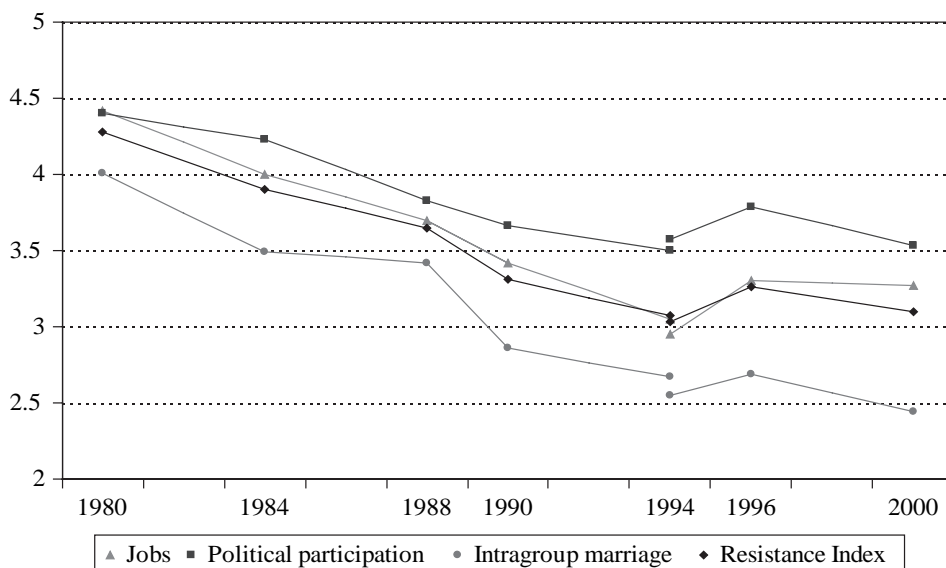


Figure 1. Changes in resistance to social integration of guestworkers and foreigners
Note: From 1980 to 1994 (split questionnaire 1) the items refer to ‘guestworkers’; from 1994 (split questionnaire 2) to 2000, to ‘foreigners living in Germany’.

Note that the differences between the mean scores in 1994 were not significant. We also ascertained that a change in survey administration in 2000 had no significant effect on the mean score.¹⁵

In line with previous studies, based on data up to 1996, the figure clearly shows the general downward trend in resistance to social integration. Moreover, we see again the slight upward change between 1994 and 1996. However, of particular interest is the period after 1996. It turns out that the counter-trend did not continue. From 1996 to 2000, resistance to social integration once again decreased. Hence, over two decades, there was an overall trend towards less resistance to social integration, only interrupted by a reverse trend between 1994 and 1996. Note that the increase between 1994 and 1996 was significant (at a 5 per cent significance level). We also note that there were no changes between 1994 and 1996 with respect to the fieldwork methods: both surveys were conducted by the same survey institute, with the same mode of administration and sampling mode. Hence, it appears that the change between 1994 and 1996 was not a methodological artefact, but indicative of a real increase in resistance to social integration.

Cohort Changes in Resistance to Social Integration: Analyses and Results

Before we turn to a test of our hypotheses regarding individual, period and cohort characteristics, we explore the overall as well as the intra-cohort change in resistance to the social integration of foreigners. The overall change between 1980 and 2000, as

depicted in Figure 1, may result from either net individual change or population turnover, or both (Firebaugh 1997). That is, the aggregate change may stem from individual change in attitude or from a change in population composition since older birth cohorts die off and are replaced by younger birth cohorts with different attitudes.

To explore both sources of aggregate change, we distinguished birth cohorts with a range of five years. Table 1 displays the *mean score* on resistance to the social integration of foreigners in various years, for each birth cohort as well as for the total population. The corresponding intra-cohort and overall *changes* in resistance to the social integration of foreigners are displayed in Table 2. The mean scores within a column in Table 1 show the differences between cohorts. In cross-sectional studies, such differences are very often considered to be age effects, although they might also be cohort effects. Furthermore, one can follow a birth cohort through time by comparing the mean scores within a row, since at each point in time a random sample of the same birth cohort was drawn. This intra-cohort change is the net change among individuals within a specific cohort, and may stem from either life-cycle or period effects.¹⁶

The differences in attitude between birth cohorts at each point in time (as displayed by the eta's in the last row of Table 1) turned out to be considerably larger than the intra-cohort differences across time (as displayed by the eta's in the last column of Table 1). In other words, differences between cohorts in the resistance to the social integration of foreigners were relatively strong, whereas changes among individuals within cohorts were relatively small. Table 1 shows in general that older cohorts resist more strongly the social integration of foreigners than younger cohorts.

The lower part of Table 2 shows the overall change (for all cohorts) and the average within-cohort change.¹⁷ By comparing the overall change with the average within-cohort change, we get a quick glance at the extent to which the overall change stems from (net) individual attitude change as opposed to stemming from cohort replacement. For the periods 1980–84, 1984–88, 1988–90 and 1990–94, we see that about one third or more of the overall change is due to attitude change within cohorts. On average, the net individual attitude change was toward less resistance to social integration. This trend toward less resistance was reinforced by the effect of cohort replacement: older cohorts who generally showed more resistance (as displayed in Table 1) were replaced by younger cohorts with generally less resistance. Consequently, the decline in overall resistance was stronger (overall change ranged from –0.25 to –0.38) than the decline in average resistance among birth cohorts (average within-cohort change ranged from –0.09 to –0.27). In contrast, in the period 1994–96, the net individual change was in the opposite direction toward *stronger* resistance (+0.26). Hence, in 1994–96 net individual change and cohort replacement had opposite effects. Consequently, the overall change in resistance was smaller than the average within-cohort change.

In Table 1 we ascertained wide differences between cohorts at each point in time: older cohorts showed more resistance than younger cohorts. Next, we take a closer

Table 1. Intra-cohort and overall mean score on resistance to social integration: 1980–2000

Cohort	Year of measurement														<i>Eta within a cohort across years</i>
	1980		1984		1988		1990		1994		1996		2000		
	mean	N	mean	N	mean	N	mean	N	mean	N	mean	N	mean	N	
1896–1900	5.28	42	—	— ^a	—	— ^a	—	— ^a	—	— ^a	—	—	—	—	— ^b
1901–1905	5.17	101	5.16	76	4.45	38	—	— ^a	—	— ^a	—	— ^a	—	— ^a	0.19
1906–1910	5.14	186	4.83	136	4.49	92	4.53	24	4.30	20	—	— ^a	—	— ^a	0.17
1911–1915	5.04	267	4.75	204	4.58	148	5.01	54	4.06	55	4.99	35	—	— ^a	0.17
1916–1920	4.75	178	4.40	178	4.41	181	4.11	60	3.95	58	4.23	59	—	— ^a	0.15
1921–1925	4.61	244	4.54	250	4.39	222	4.30	100	4.06	124	4.35	96	3.61	31	0.13
1926–1930	4.53	228	4.33	220	4.31	226	3.75	115	3.63	148	4.13	144	4.41	49	0.18
1931–1935	4.37	246	4.09	209	3.98	202	4.00	92	3.56	161	4.16	164	3.50	63	0.16
1936–1940	4.16	287	4.01	279	3.88	257	3.55	144	3.36	223	3.72	201	3.39	99	0.17
1941–1945	3.98	292	3.71	261	3.45	212	3.28	105	3.30	159	3.38	182	3.06	71	0.16
1946–1950	4.02	264	3.56	295	3.48	255	3.23	122	2.68	177	3.08	194	2.96	64	0.24
1951–1955	3.36	284	3.23	293	3.16	272	2.91	157	2.71	192	2.84	185	3.13	86	0.13
1956–1960	3.36	232	3.14	275	3.08	310	2.68	144	2.52	227	2.90	208	2.84	74	0.16
1961–1965	3.23	78	3.02	261	3.03	368	2.45	168	2.55	232	2.67	247	2.52	108	0.15
1966–1970	—	—	2.59	21	2.90	263	2.47	121	2.57	240	2.55	217	2.80	68	0.11
1971–1975	—	—	—	—	—	—	2.63	28	2.57	136	2.57	165	2.52	56	0.02
1976–1980	—	—	—	—	—	—	—	—	—	—	2.38	50	2.80	57	— ^b
All cohorts	4.28	2929	3.90	2975	3.65	3051	3.31	1448	3.05	2161	3.26	2166	3.10	853	
<i>Eta across cohorts within a year</i>	0.33		0.34		0.32		0.40		0.34		0.40		0.32		

^a figures not displayed if cohort contained fewer than 20 respondents.^b eta not calculated if group comparison is based on fewer than 3 cohorts with 20 respondents or more.

Table 2. Intra-cohort and overall change in resistance to social integration: 1980–2000

Cohort	1980–84	1984–88	1988–90	1990–94	1994–96	1996–2000
1896–1900	— ^a	— ^a	— ^a	— ^a	—	—
1901–1905	–0.01	–0.71	— ^a	— ^a	— ^a	— ^a
1906–1910	–0.31	–0.34	+0.04	–0.23	— ^a	— ^a
1911–1915	–0.29	–0.17	+0.43	–0.95*	+0.93	— ^a
1916–1920	–0.35	+0.01	–0.30	–0.16	+0.28	— ^a
1921–1925	–0.07	–0.15	–0.09	–0.24	+0.29	–0.74
1926–1930	–0.20	–0.02	–0.56*	–0.12	+0.50	+0.28
1931–1935	–0.28	–0.11	+0.02	–0.44	+0.60*	–0.66
1936–1940	–0.15	–0.13	–0.33	–0.19	+0.36	–0.33
1941–1945	–0.27	–0.26	–0.17	+0.02	+0.08	–0.32
1946–1950	–0.46*	–0.08	–0.25	–0.55	+0.40	–0.12
1951–1955	–0.13	–0.07	–0.25	–0.20	+0.13	+0.29
1956–1960	–0.22	–0.06	–0.40	–0.16	+0.38	–0.06
1961–1965	–0.21	+0.01	–0.58*	+0.10	+0.12	–0.15
1966–1970	—	+0.31	–0.43	+0.10	–0.02	+0.25
1971–1975	—	—	—	–0.06	0.00	–0.05
1976–1980	—	—	—	—	—	+0.42
Overall change	–0.38*	–0.25*	–0.34*	–0.26*	+0.21*	–0.16
Average within-cohort change (weighted by size)	–0.24*	–0.09*	–0.27*	–0.18*	+0.26*	–0.12

* $p < 0.5$, ^a figures not displayed if cohort contained fewer than 20 respondents.

look at the intra-cohort changes in Table 2. The change in attitude among individuals born in the same time period may stem either from life-cycle effects or period effects or both. When we look at the intra-cohort changes in the period 1980–94 we see that—with only a few exceptions—the various birth cohorts *all* display the same trend toward less resistance to social integration. Likewise, in the period 1994–96 almost *all* birth cohorts show an increase in resistance to social integration. The question is: does the sequential decrease and increase in resistance to social integration stem from life-cycle effects or period effects? It seems plausible that these net individual changes are to a large extent due to period effects. After all, the birth cohorts differ considerably with respect to their life cycle. Despite their different phases in the life cycle, all of these cohorts displayed the same change in attitude.

In contrast to this inter-cohort similarity in attitude change, between 1996 and 2000 there were large differences between cohorts in the change in attitude: whereas within some birth cohorts the resistance to the social integration of foreigners decreased, within other birth cohorts it increased. This suggests the existence of cohort effects, since various cohorts reacted differently to the same historical events during the period 1996–2000. Although there were some exceptions, it appears that the older birth cohorts (born before 1946) mostly changed towards less resistance, the middle-aged birth cohorts (born between 1946 and 1965) were mostly relatively stable, whereas the younger birth cohorts (born after 1965) mostly changed towards more resistance. One plausible interpretation would be that the young, who have to enter or have recently entered the labour market, are more strongly affected by contemporary societal circumstances such as the level of unemployment, and will therefore react more strongly to contemporary societal events than the older birth cohorts.

Hence, in this explorative cohort analysis, we found strong differences in resistance to the social integration of foreigners between various birth cohorts and we assumed that the individual changes within cohorts mostly stem from period effects. In the next section, we continue our analysis of age, period and cohort effects from a different angle, i.e. by replacing the cohort and period variables with theoretically relevant characteristics of the societal conditions during the formative years (cohort characteristics) and at the time of survey measurement (period characteristics).

Individual, Period and Cohort Characteristics as Determinants of Resistance to Social Integration: Analyses and Results

One of the major problems inherent in this type of analysis is to avoid the inclusion of theoretically relevant determinants as substitutes for period and cohort characteristics that may be, however, empirically strongly related to one another (or to age), thereby inducing problems of collinearity.

One can think of various societal circumstances during the formative years which theoretically might affect one's attitudes. However, if such a cohort characteristic is strongly related to age, then it becomes impossible to empirically disentangle the

effect of age from the effect of that cohort characteristic. For instance, the percentage of foreigners during the formative years is strongly related to age ($r = -.85$). Hence, we could not incorporate this cohort characteristic in our final model. Likewise, we found a rather strong and understandable relationship between age and immigration during formative years ($r = -.59$): younger people witnessed more immigration than older people did during their formative years. We return to this issue and the consequences for interpreting the age-effect in the discussion part of our paper.

Furthermore, with regard to period characteristics, we were confronted with the following dilemma. In order to grasp as much of the theoretically relevant societal circumstances as possible, one would like to include many period characteristics. However, the degrees of freedom were limited since there are 'only' seven time-points at which the same survey questions were available. Hence, we had to restrict the number of period characteristics. Figures on the level of (and change in) immigration and asylum were naturally strongly related, therefore we only included the immigration figures. Furthermore, in spite of the fact that our theoretical hypotheses led us to propose that particularly *dynamic changes* in societal circumstances may affect resistance to social integration, we also tried to test hypotheses on *stable* circumstances that may have similar effects. However, it turned out that models in which both the level and the change in period characteristics were included had an unsatisfactorily high amount of collinearity. For instance, there is a strong relationship between the level of immigration as a period characteristic and changes in the unemployment rate. One could also anticipate a relationship between the unemployment rate and changes in immigration—for which we, however, found no strong evidence.

For these reasons, we were forced to estimate a parsimonious model including determinants related to dynamic changes in periodic societal circumstances and stable circumstances during one's formative years. The final model we present has a condition number of 36 whereas, in general, condition numbers larger than 30 might indicate a serious degree of collinearity, and therefore one should inspect whether there are collinear sets of predictors (Belsley *et al.* 1980). Inspection of the variance proportions of the effect parameter estimates shows no collinear sets of predictors in our regression model. Furthermore, the variance inflation factor (VIF) of almost all effect parameter estimates is lower than 4, hence lower than the strict criterion of Fischer and Mason (1981). Only the effect parameter estimate of the nominal category 'otherwise not employed' has a VIF-value of 4.8, which is still considerably lower than 10 (the criterion of Chatterlee and Price 1977). Let us take a look at the results of this model in Table 3. With regard to categorical variables, a standardised regression coefficient of a composite variable reveals the overall effect of a categorical variable, and these coefficients are presented in italics in Table 3.¹⁸

In order to be able to ascertain whether the effects of the model we propose are reasonably robust, we also present a more straightforward model 1 containing the year of measurement as a determinant. The dummies for year of measurement show estimates that represent differences in means in the research population

regarding resistance to social integration, as compared to the year 1980. These estimates have the same pattern already described above. Below these estimates we present parameter estimates of unstandardised regression coefficients related to individual characteristics. Inspection of these parameters of model 1 with the ones estimated by model 2, in which the period and cohort characteristics are included instead of the year of measurement, shows that the parameter estimates are rather equivalent. Therefore, we will describe the results of model 2, i.e. the model containing the theoretically relevant estimates of period and cohort characteristics.

Let us first consider the effects of period characteristics. We find that a change in the unemployment rate over the last five years as well as a change in foreign immigration both have a positive effect on resistance to social integration (beta .107 and .118). Hence, we observe—in line with our hypothesis—that an *increase* in ethnic competition—as indicated by rising unemployment and/or rising immigration—is accompanied by more resistance to social integration. But how about the contemporary *level* of ethnic competition? Unfortunately, we could not estimate a model with four period characteristics (including both the level and the change in unemployment and immigration) due to strong collinearity. Instead, we were only able to analyse either a model with the *change* in unemployment and immigration (presented in Table 2), or a model with the *level* of unemployment and immigration. The latter model also had satisfactory collinearity statistics (condition index was 39.7, with no collinear set of predictors). It turned out that the effects of the level of unemployment (beta $-.089$) and immigration (beta $-.059$) were contrary to the hypotheses: resistance to the social integration of foreigners was smaller when unemployment and immigration were high. With regard to the other predictors, such as age and unemployment during formative years, we found the same substantial results in this analysis as the one presented in Table 2. In short, with regard to period characteristics, we found that a higher *level* of ethnic competition is not related to *stronger* resistance to social integration, but an *increase* of ethnic competition is.

Then, with regard to the cohort characteristics, it turned out, in line with our hypothesis, that the level of unemployment during one's formative years had a positive effect (beta .024) on the resistance to social integration. Cohorts that grew to maturity in times of high unemployment show relatively more resistance. At this point, the age effect deserves special attention: it amounts to merely .078 (standardised coefficient, controlled for other characteristics), which, compared to the bivariate associations presented in Table 1 (ranging between .32 and .40), is quite minor.

Finally, let us have a look at the individual characteristics that we hypothesised to be related to resistance to social integration. We proposed to test the hypothesis that people who hold similar societal positions as ethnic minorities may be more resistant to social integration. We find that people with only primary (or less) education are significantly (.726) more resistant to social integration than people who have attained a higher level of scientific training, but this also holds for people with middle-level secondary education (.354) or with a higher level of vocational training (.154). These

Table 3. Resistance to social integration: regression effects of individual, period and cohort characteristics

	Model 1		Model 2	
	b	Beta	b	Beta
Intercept	1.108 **		-.001	
<i>Year of measurement</i>		.129		
1980	—			
1984	-.102 *			
1988	-.179 **			
1990	-.406 **			
1994	-.666 **			
1996	-.359 **			
2000	-.570 **			
<i>Period characteristics</i>				
Change in unemployment in past 5 years			.328 **	.107
Change in foreign immigration in past 5 years			.297 **	.118
<i>Cohort characteristics</i>				
Unemployment during formative years			.014 **	.024
<i>Age</i>	.014 **	.098	.011 **	.078
<i>Education</i>		.155		.167
Primary education or less	.676 **		.726 **	
Middle-level secondary education	.337 **		.354 **	
Higher-level vocational training	.141 *		.154 *	
Higher-level scientific training (ref.)	—		—	
<i>Occupation</i>		.078		.071
Higher service (ref.)	—		—	
Lower service	.092		.080	
Routine non-manual clerical/sales	.307 **		.272 **	
Small employers	.414 **		.382 **	
Independent	.366 **		.336 **	
Farmers and farm workers	.401 **		.351 **	
Manual foremen	.299 **		.276 **	
Skilled manual workers	.421 **		.366 **	
Semi-/unskilled manual workers	.514 **		.469 **	
Other routine non-manual	.402 **		.348 **	
Employed, not classifiable	.271 **		.228 **	
Unemployed	.501 **		.448 **	
Otherwise not employed	.216 **		.175 **	
<i>Income</i>		.028		.032
Lowest quartile	-.007		-.038	
Second quartile	.085		.070	
Third quartile	.064		.061	
Highest quartile	—		—	
Missing	-.046		-.074	

Table 3 (Continued)

	Model 1		Model 2	
	b	Beta	b	Beta
<i>Denomination</i>		<i>.026</i>		<i>.027</i>
Protestant	.145 **		.150 **	
Catholic	.128 **		.120 *	
Other denomination	.055		.051	
No religion	—		—	
<i>Size of community</i>		<i>.039</i>		<i>.035</i>
Fewer than 20,000 citizens	—		—	
20,000–100,000 citizens	.051		.063	
100,000–500,000 citizens	.017		.037	
500,000 or more citizens	–.155 **		–.121 **	
<i>Political attitudes</i>				
Left–right self placement	.114 **	.107	.123 **	.115
Materialism index	.334 **	.206	.349 **	.215
<i>Contact with guestworkers/foreigners</i>		<i>.171</i>		<i>.185</i>
Within the family	–.152 **		–.157 **	
At the place of work	–.134 **		–.155 **	
In the neighbourhood	–.030		–.036	
Among friends or acquaintances	–.517 **		–.556 **	
Adj. R ²	.274		.267	

Note: Respondents born in 1930 or younger, N = 10,798. Beta coefficients of composite variables in italics. Ref = reference category. * $p < .05$, ** $p < .01$ (two-tailed).

findings are quite consistent with our hypotheses and with previous findings in the United States (Vogt 1997) and Europe (Hello *et al.* 2002).

Quite often, the effects of educational attainment are so strong that the direct effects of strongly related determinants like income become spurious. This also holds for Germany: we find no significant differences at all between people belonging to different income categories. However, we (still) find significant differences between people belonging to distinct occupational categories. It turned out that people who perform semi- and unskilled manual work express the strongest resistance to social integration (.469), compared to people belonging to the higher service class, followed by the unemployed (.448). Next, we find skilled manual workers (.366) to show more resistance alongside some categories that may be described as the petty bourgeoisie: small employers with and without employees and farmers show a fairly strong resistance to social integration (.382, .336 and .351 respectively)—which has also been ascertained in the Netherlands and Belgium (Billiet *et al.* 1996). Next come manual foremen, routine non-manual workers, and those employed but non-classifiable: they

also resist social integration. Only the category of people in lower service does not significantly differ from people in higher service. In general, these findings are quite consistent with our hypotheses and results from other European countries (Scheepers, Gijsberts and Coenders 2002).

Next, we consider determinants that relate to social closeness: living in urbanised surroundings where many ethnic minorities live and having social contacts with ethnic minorities. We find that people living in urbanised surroundings, i.e. in cities of more than 500,000 inhabitants, show significantly *less* resistance to social integration (–.121) than people living in small towns. We find similar effects for social contacts: all of these effects are negative, implying that the more inter-ethnic contacts people have, the less they oppose social integration. All of these effects are significant except for the effect of having inter-ethnic contacts in the neighbourhood. It turns out that the effect of having social contacts with people considered to be friends or acquaintances is the strongest, which may not come as a surprise. These findings generally corroborate previous results (Hamberger and Hewstone 1997). However, insoluble problems of chronological order between contact with and attitudes toward ethnic minorities may lead to overestimation of these effects.

Let us finally consider the effects of determinants included for theoretically non-elaborated purposes. People belonging to Protestant and Catholic denominations show more resistance to social integration than non-religious people, which has been found previously—although there is an abundance of inconsistent evidence on this point (cf. Scheepers, Gijsberts and Hello 2002). Furthermore, we find that previous results on the effects of political attitudes are replicated: the more right-wing people are and the more materialist they are, the stronger they oppose social integration.

Observed and Predicted Means: Fitting Models?

After having discussed these results, one may wonder to what extent this model actually predicts the observed scores of the Germans over the 1980–2000 period. For this purpose, see Figure 2, where we present the observed mean scores on resistance to social integration, the predicted mean scores calculated with a model containing merely period and cohort characteristics, and the predicted mean scores calculated with a model containing individual characteristics, alongside period and cohort characteristics.

Let us first consider the deviations between the observed scores and the scores predicted by the model with contextual characteristics. Although this model predicts scores that, from 1988 on, are too high, they do follow the same trend as the observed scores: the decrease in the mean (observed and predicted) scores from 1988 to 1994 are similar, followed by the increase in the mean score between 1994 and 1996, presumably due to increases in unemployment, followed by the decrease between 1996 and 2000, related to decreases in unemployment. However, the predicted means for the period 1980–88 deviate from the observed means. These predicted scores are too low and, moreover, follow a different trend: whereas the observed scores decrease

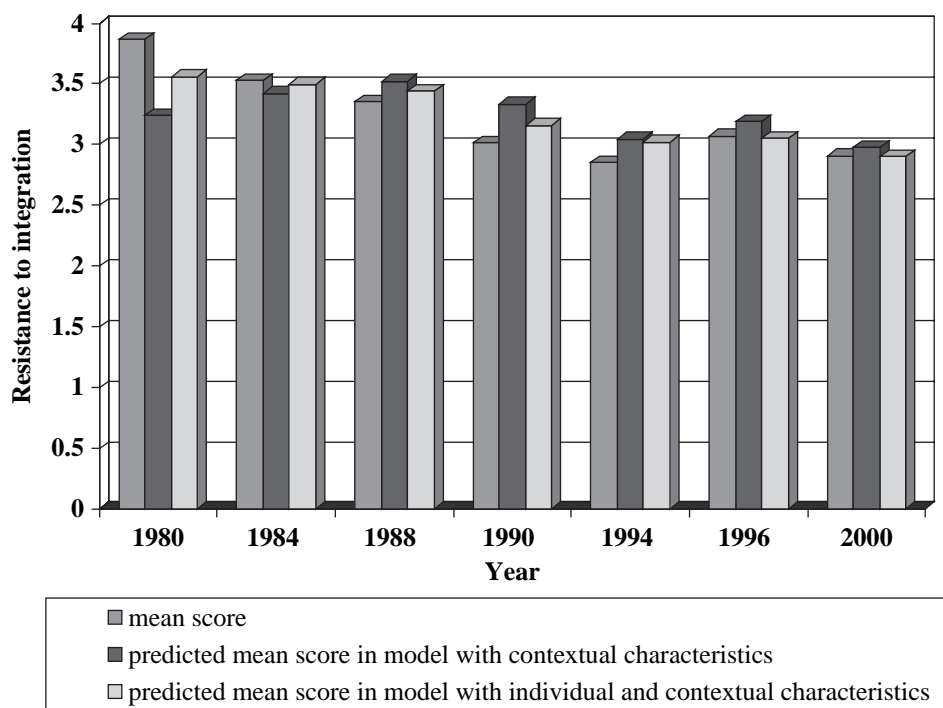


Figure 2. Mean score and predicted mean score in resistance to social integration

from 1980 to 1988, the predicted scores increase. These increases in predicted scores result from a model that accounts for the rises in unemployment and immigration during the 1980s, which actually took place. And yet, the observed scores decreased, which implies that the model does not predict the observed scores accurately. In other analyses, not presented here, we found that these deviations may have been due to changes in the composition of the German population. In particular, there was an increase in the percentage of higher educated people as well as of people having social contacts with foreigners, i.e. categories of people that previous analyses have shown to be less resistant to social integration. Taking into account these determinants to calculate predicted scores, also presented in Figure 2, leads to predicted scores that come quite close to the observed scores *and* follow the same trend as the observed scores. This model, however, assumes that the effects of individual determinants are exactly the same over this period, which may not be a very reasonable assumption. Further analyses, taking into account both varying effects over time and changes in the population composition, may shed light on these deviations.

Discussion and Conclusion

In this paper we have focused on the change in resistance to the social integration of foreigners in (Western) Germany between 1980 and 2000, and tested hypotheses with

regard to individual and contextual determinants of such resistance. We constructed an index of resistance, based on three items that can be considered as an equivalent measurement instrument over time. Overall, we found between 1980 and 2000 a general decline in the resistance to social integration, interrupted by a minor increase between 1994 and 1996.

Cohort analysis showed relatively strong differences between birth cohorts: older cohorts were more negative to the social integration of foreigners than younger cohorts. Hence, cohort replacement—the process in which relatively intolerant older cohorts are replaced by relatively tolerant younger cohorts—leads to less resistance to social integration over time. Next to cohort replacement, the aggregate change in resistance to social integration stems from net individual change. Cohort analysis showed that nearly all birth cohorts displayed the same change in attitude between 1980 and 1996: first a continuous drop in resistance, followed by a rise between 1994 and 1996. This similarity in within-cohort changes hints at the existence of period effects. To investigate the effect of period and cohort characteristics more rigorously, we estimated the effects of individual and contextual characteristics, derived from Ethnic Group Conflict Theory, simultaneously by means of multiple regression analysis. The availability of data regarding the formative years forced us to restrict this analysis to respondents born in 1930 or later.

We found that contemporary resistance to the social integration of foreigners was relatively stronger among birth cohorts that were confronted with high unemployment during their formative years. Furthermore, resistance was related to age: the older the respondents, the stronger their resistance, which can be interpreted as the result of social and political conservatism that increases with age. However, the differences between age groups may to some extent also reflect the impact of different experiences during the formative period that could not be incorporated into our analyses. For instance, the oldest birth cohorts grew up in times when there were hardly any foreigners living in Germany, limiting the opportunity to get acquainted with foreigners and presumably resulting in stronger negative attitudes towards them. When the foreign population gradually grew, this may have been accompanied by more acquaintances and less-negative attitudes towards them. However, if the percentage of foreigners during the formative years increases even more, then perceptions of ethnic competition may prevail among the ethnic majority group, presumably resulting in stronger negative attitudes. In short, one can propose a curvilinear relationship between the percentage of foreigners during the formative years of a birth cohort and its contemporary attitudes toward foreigners. Due to the strong relationship between age and foreign population during formative years, one cannot empirically disentangle these effects.

Moreover, with regard to period characteristics, we found that strong resistance to social integration is not related to high levels of unemployment and immigration, but instead to recent increases in unemployment and immigration. According to Ethnic Group Conflict Theory, high and increasing levels of ethnic competition lead to more negative attitudes towards foreigners. Our results suggest that it is increasing ethnic

competition that boosts negative attitudes towards foreigners. We found somewhat similar results in the Netherlands (Coenders and Scheepers 1998). In line with the German results, we found in our Dutch study that increasing unemployment and increasing foreign immigration were accompanied by more negative attitudes towards ethnic minorities in the period 1979–93. In the latter analysis, we had a larger number of surveys and therefore we were able to incorporate both the level as well as the change of immigration and unemployment as period characteristics into the analysis. Controlling for the change in immigration and unemployment, we found that the level of immigration was positively related, but unemployment was negatively related, to negative attitudes toward ethnic minorities. Hence, as in Germany, we found that negative attitudes toward ethnic minorities are heightened not by high unemployment, but by increasing unemployment.

With respect to individual determinants of resistance to social integration, we also derived a number of hypotheses from Ethnic Group Conflict Theory. In line with our hypotheses, we found that people holding more or less similar social positions as ethnic minorities in Germany show relatively high resistance to social integration. People living in urban areas as well as people having social contacts with foreigners turned out to be less resistant to social integration, which supports theoretical claims from which the contact hypothesis was derived. However, we suggest that, to examine this hypothesis more thoroughly, a research design needs to be developed to solve the causal sequences of social contacts and support of social integration.

Our findings indicate overall that the short counter-trend in the general decline in resistance to social integration that occurred in the mid-1990s in West Germany may have been due to rising unemployment. As yet, these findings suffer to some extent from methodological problems: it is impossible to ascertain to what extent the applied direct measurements (of period and cohort characteristics) are exhaustive and take into account all of the relevant social circumstances in a given period or during one's formative years (Firebaugh 1997). The solution to this problem is *not* to consider as many societal circumstances as possible, because these trends tend to correlate strongly with each other as well as with age which, again, leads to problems of multi-collinearity. However, since this model including individual, period and cohort characteristics predicts the observed scores quite accurately, we consider it to be quite satisfactory to explain changes in resistance to the social integration of foreigners.

Notes

- [1] This elaboration is considered to be odd by some (e.g. Forbes 1997), but underlined by others (Brown 1995; Jones 1997). In the early 1970s it was found that some level of ingroup favouritism exists even in minimal (experimental) conditions, i.e. in conditions of 'random' social categorisation (Tajfel 1981; Tajfel *et al.* 1971). This implies that there is some level of ingroup favouritism, even without any actual or perceived competitive conditions. Then,

Realistic Conflict Theory proposes that actual competition between ethnic groups may reinforce both ingroup favouritism and outgroup hostility, i.e. ethnocentrism.

- [2] Several distinct mechanisms, other than the one we propose, might be responsible for the relation between low education and ethnic exclusionism (for an overview, see Vogt 1997; also Coenders and Scheepers 2003). However, the focus is not on these mechanisms as such.
- [3] The question formulations read: '(Guestworkers/foreigners living in Germany) should be sent back home if job opportunities become low', '(Guestworkers/foreigners living in Germany) should be prohibited from political participation in Germany', '(Guestworkers/foreigners living in Germany) should seek their marriage partner among their own people'. From 1980 through 1990 and 1994 (split questionnaire 1), the items refer to 'guestworkers', from 1994 (split questionnaire 2) to 2000 to 'foreigners living in Germany'.
- [4] The fourth item reads '(Guestworkers/foreigners living in Germany) should adjust their lifestyle a bit more to the German one'. Overall, the correlation between the lifestyle item and the other three items ranges between 0.34 and 0.40, whereas the intercorrelations among the three resistance items range between 0.48 and 0.52.
- [5] The ALLBUS class scheme deviates from the scheme of Erikson and Goldthorpe (1992) as it consists of an additional category of 'other routine non-manual workers', mostly women, employed in non-clerical positions. We subsumed the small number of farmers and farm workers into one category, as they did not significantly differ in the average score on resistance to the social integration of foreigners. Finally, we added an additional category ('employed, not classifiable') consisting of respondents who were employed but whose class category could not be determined due to lack of information.
- [6] Left-right self-identification was not measured in 1984. In order to include the 1984 survey in the overall analyses, we decided to assign all respondents from the 1984 survey the mid-value of the scale, that is, a score of 5.5, which is almost identical to the average score across all other surveys between 1980 and 2000 (mean = 5.46).
- [7] The unemployment figures in the Western part of Germany, as well as other period characteristics, are as of 1991 based on figures including the Eastern part of Berlin.
- [8] Figures are derived from the official registration bureau. However, a comparison of these official statistics with the number of foreigners according to the 1987 Census shows an overestimation of the foreign population. The figures of the official registration bureau for 1987 to 1989 were therefore corrected (Statistisches Bundesamt various years b). Since it was assumed that the overestimation in the official registration decreases over time, the correction was the largest in 1987 and the smallest in 1989. Consequently, the statistics as published by the Statistisches Bundesamt show an overestimated drop in the number of foreigners between 1986 and 1987. Since we are looking at the changes within a five-year period, this does not seriously distort our measurement.
- [9] As of 1991, figures relate to reunified Germany. As of 1994, only first-time applications are registered in the Statistical Yearbooks.
- [10] Although the time span of five years is a bit arbitrary, we note that we replicated the analyses operationalising the change in period characteristics as the change compared to the previous year. We found the same substantial results with regard to the effect of period characteristics as reported in this article. However, it turned out that the change in unemployment and the change in immigration, both operationalised as the change compared to the previous year, formed a set of collinear variables in this additional analysis. Hence, we only present the results for change compared to five years earlier.
- [11] Yearly relative unemployment figures from 1970 onwards are published in the Statistical Yearbook of the Statistisches Bundesamt. For the period 1950–70, we estimated the yearly relative unemployment figures, according to the same definition (as percentage of civil dependent labour force), based on absolute numbers of unemployed, the total labour force, and the relative size of the dependent employed labour force to the total employed labour

- force (Statistisches Bundesamt various years a). The changes between 1950–70 regarding our estimated relative unemployment figure closely match the time-series of relative unemployment figures, based on a slightly different definition of relative unemployment, but which only covers the period up to 1972 (Statistisches Bundesamt 1972).
- [12] Yearly figures are available as of 1967. In 1951 1.0 per cent of the population were foreigners, in 1961 and 1962 1.2 per cent, and in 1967 3.0 per cent. Figures in the intermediate years were estimated by means of linear interpolation.
 - [13] Yearly figures available as of 1952. The amount of foreign immigration in 1950 and 1951 was assumed to be equal to 1952.
 - [14] A multi-sample structural equation model with invariance over time in factor loadings, factor variance and measurement errors had an acceptable goodness of fit (GFI = 0.960, RMSEA = 0.043). There are only minor over-time variations in the factor loadings, measurement errors, and reliability measures. The results from these analyses can be obtained by contacting the first author.
 - [15] Whereas previous ALLBUS surveys were administered with paper and pencil (PAPI), the main ALLBUS2000 survey was administered by computer (CAPI). By comparing the main ALLBUS2000 sample with the additional PAPI method sample in 2000, we ascertained that differences in the administration had no significant effects on the item means. Note that we did not apply the PAPI method sample in 2000 in the analyses as reported in this contribution.
 - [16] Note that one cannot detect gross individual change since the ALLBUS is a repeated cross-section design instead of a panel design. Hence, one can only detect the net effect of individual changes by following birth cohorts (and not individuals) over time (Firebaugh 1997).
 - [17] The average within-cohort change was calculated as the sum across all cohorts of the weighted intra-cohort change. The intra-cohort change between two points in time was weighted by the average sample size of the cohort at both points in time, taken as a proportion of the average total sample size at both points in time.
 - [18] A composite variable for each categorical variable was constructed by applying the unstandardised regression coefficients for the dummified categories as weights (Eisinga *et al.* 1991). The sign of the standardised regression coefficient for the composite variable is by definition positive. The size of the coefficient reveals the size of the overall effect of the categorical variable.

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